

*Arts Education Still Makes A Difference*  
*in Missouri Schools.*



**A STUDY OF FINE ARTS EDUCATION IN  
MISSOURI SCHOOL DISTRICTS.**

*Funded by the Missouri Arts Council.*

# MAKING THE ARTS

*a basic part of  
education for all  
Missourians.*



Missouri Alliance  
for Arts Education

# ►ABOUT

## *The Missouri Alliance for Arts Education*

The Missouri Alliance for Arts Education (MAAE), a member of the national Kennedy Center Alliance for Arts Education, is a not-for-profit organization that works to develop and implement statewide comprehensive arts education plans with the goal of providing the best possible education for all Missourians by making the arts a integral part of their education. Key activities of the MAAE include:

- Providing professional development for educators, administrators, and teaching artists;
- Conducting research into arts education and the benefits of its inclusion in all schools;
- Supporting Show-Me Arts, a student leadership and advocacy training program;
- Sponsoring an annual Fine Arts Education Day at the state capitol to demonstrate the impact of the arts on students;
- Advocating for the arts education in all schools at all levels;
- Advocating for Missouri Fine Arts Academy and other statewide programs; and
- Supporting other state and national arts education initiatives.

### **MAAE MEMBER ORGANIZATIONS**

American String Teachers Association—  
Missouri Chapter  
Missouri Art Education Association  
Missouri Association of Jazz Education  
Missouri Bandmasters Association  
Missouri Choral Directors Association  
Missouri Dance Organization  
Missouri Thespians  
Speech and Theatre Association of Missouri

### **IN ADDITION, THE ALLIANCE IS AFFILIATED OR WORKS CLOSE WITH**

Fine Arts Regional Consortium—St. Louis  
Gifted Association of Missouri  
Kansas City Regional Arts Coalition  
Kodaly of the Ozarks  
Missouri Arts Education Collaborative  
Missouri Association of Community Arts  
Agencies  
Missouri Citizens for the Arts  
Missouri Department of Elementary and  
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Missouri Fine Arts Academy  
Missouri School Boards' Association  
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Donna Pfaustch

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The Missouri Arts Council  
The Francis Family Foundation



Missouri Arts Council

815 Olive Street, Suite 16  
St. Louis, MO 63101-1503

(314) 340-6845  
or toll-free (866) 407-4752  
TDD (800) 735-2966  
Fax (314) 340-7215

[www.missouriartscouncil.org](http://www.missouriartscouncil.org)

**THE MISSOURI ARTS COUNCIL** has long recognized the value of a strong arts education, and the corresponding impact on the state: better educated students, more effective work-force, and economically vital communities. The release of “Arts Education Makes A Difference in Missouri Schools” reflects our unequivocal belief: every child benefits from art in their education.

Our partnership with the Missouri Alliance for Arts Education in funding this study is a key part of understanding the public value of the arts in our society. Appreciating and supporting the arts in general benefits from graduating students with necessary critical and creative skills. We know that adults that have encountered the arts as youth are more likely to engage with the arts as adults. Pablo Picasso recognized the challenge when he said, “Every child is an artist. The problem is how to remain an artist once we grow up.”

This report underscores, once again, the unique and complex benefits of the arts. May this report inform every school board member, educator, superintendent, parent, and legislator in Missouri. Our children’s futures depend on it.

**MICHAEL DONOVAN**

Executive Director, Missouri Arts Council

phone: (314)-340-4740

email: [michael.donovan@ded.mo.gov](mailto:michael.donovan@ded.mo.gov)



September 18, 2015

To the readers of this report:

During the past several decades, a growing number of research studies have been published that examine the value of study in and through the arts. This body of research has been extremely valuable in informing the public and educators as to the impact of arts education on student learning and achievement. Five years ago, the Missouri Arts Council and the Missouri Alliance for Arts Education partnered together to sponsor a study utilizing Missouri-specific data, in order to provide useful information to assist educators and decision makers as they determine the place of arts education in our schools.

Now that same partnership has produced a follow-up study to determine:

- 1) if recent economic turmoil in our state economy has had a negative impact on the availability of arts education in Missouri schools
- 2) if the positive results associated with robust arts programs in schools still hold true

This study would not have been possible without the generous financial support of the Missouri Arts Council, and the ongoing cooperation of the Missouri Department of Elementary and Secondary Education to provide the school data for this research. Thanks also to the leadership and members of the statewide organizations which make up the Missouri Alliance for Arts Education, for their shared vision and support of this research study. Finally, thanks to Dr. Leslie Scheuler, for her expertise and hard work to analyze the data and create this report.

This study represents another milestone in educational research in our state, as well as the nation. In fact, national arts education organizations have expressed great interest in this report and its findings. It will provide much needed data to confirm the previous study's findings, and will inform future curricular decisions to enhance arts education in Missouri's schools. In addition, the study will contribute to the body of ongoing research nationally. It is our hope that this study will provide the basis for a commitment from Missouri educators to embed arts education in every school, for every child, every day.

Sincerely,  
  
Jeff Sandquist, Chair

*Missouri Art Education Association, Missouri Choral Directors Association, Missouri Bandmasters Association, Speech & Theatre Association of Missouri, Missouri Thespians, Missouri Dance Organization, Missouri Association of Jazz Education, Missouri Arts Council, Missouri Citizens for the Arts, Missouri School Boards' Association, Missouri Association of Community Arts Agencies, VSA Missouri, Missouri Fine Arts Academy, Gifted Association of Missouri, Missouri Arts Education Collaborative, Interchange*

*MAAE is supported by generous grants from:*



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# ► *Arts Education Still MAKES A DIFFERENCE in Missouri Schools*

2015

**By Leslie Scheuler, PhD**

President and Founder, LS Associates

## **MAAE MISSION**

*The Missouri Alliance for Arts Education supports, promotes, and advocates fine arts education for the benefit of ALL Missourians.*

## **MAAE VISION**

*We envision quality fine arts education in all Missouri schools, ensuring that every student discovers and develops their fullest potential.*



Missouri Alliance  
for Arts Education

302 NE Keystone Drive  
Lee's Summit, MO 64086

(314) 753-5805 Fax

(573) 332-0345

[info@moaae.org](mailto:info@moaae.org)  
[www.moaae.org](http://www.moaae.org)

**Every School, Every Child, Every Day.**

# *Arts Education Still Makes a Difference in Missouri Schools: 2015 Update*

## ►KEY FINDINGS

In 2010, the Missouri Alliance for Arts Education released a report that showed the positive relationships between the level of fine arts education and student outcomes like standardized test scores, attendance rates, discipline rates, and high school graduation rates. In 2014-15, core data submitted to the Missouri Department of Elementary and Secondary Education by the state's public school districts was again analyzed, revealing the following results:

### ONE

Most students in Missouri public schools continue to have opportunities to participate in fine arts education, particularly in the areas of Visual Art and Music. Course offerings in Dance and Theater continue to be limited.

### TWO

The level of student participation in fine arts classes at the district level is significantly related to student attendance rates. That is, the higher the number of fine arts courses and the student enrollment in these courses,<sup>1</sup> the higher the attendance rate.

### THREE

Levels of student participation in arts education continue to be significantly correlated to standardized test scores (MAP scores) in Mathematics, with higher arts participation equaling higher Math scores (across all grades tested) at the district level.

### FOUR

Levels of student participation in the fine arts is also significantly related to test scores in English Language Arts, with higher participation equaling higher MAP scores across the district for students in all grades tested.

### FIVE

In a departure from the 2010 results, student participation in arts education no longer shows a significant correlation with disciplinary rates or with high school graduation rates. It is still true that districts with higher levels of fine arts participation show higher high school graduation rates and lower disciplinary rates than districts with low levels of arts education, but the results are no longer statistically significant. This means that chance, or other factors besides the level of arts education, could be responsible for the differences.

### SIX

When controlling for district poverty levels, the relationships between arts participation and standardized test scores in Math and English Language Arts are still significant. So is the relationship between fine arts education and attendance rates.

### SEVEN

The same is true when controlling for the percentage of African American and Hispanic students (racial/ethnic groups that are more at-risk for low academic achievement): the link between arts education and positive student indicators is still significant (for attendance rates and standardized test scores).

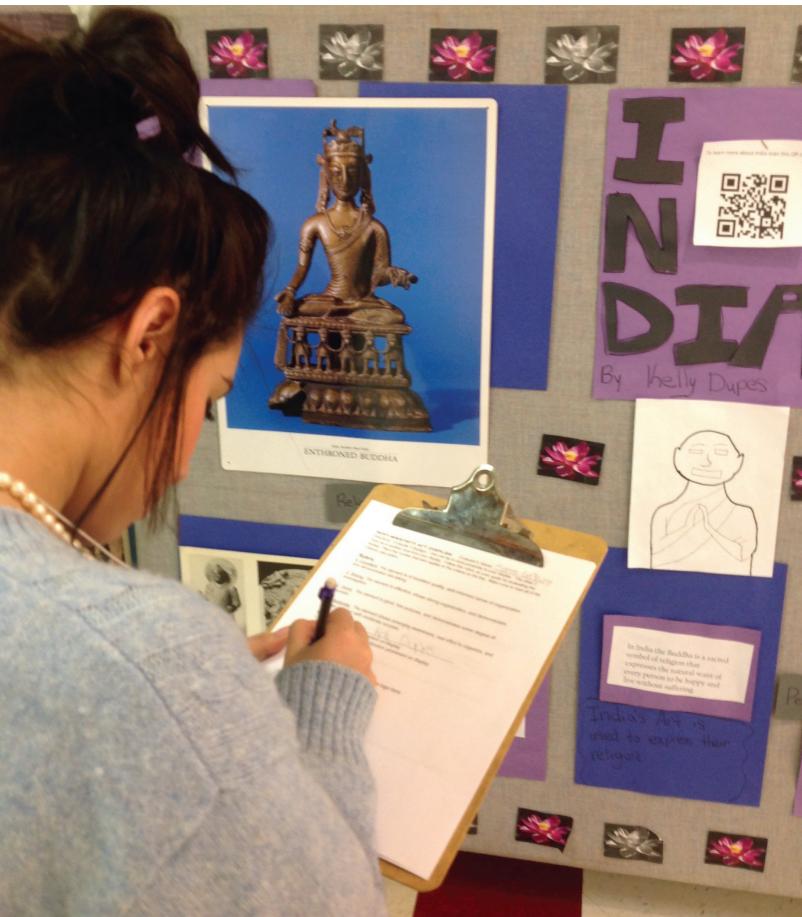
# ►CONCLUSIONS

## ONE

Student participation in fine arts courses continues to be related to a number of positive educational outcomes in Missouri public schools, including attendance rates and test scores.

## TWO

The positive relationship between fine arts participation and student outcomes is true for districts across the socioeconomic spectrum. That is, the study findings apply to districts with higher percentages of children in poverty and of those from minority racial/ethnic backgrounds as well as to districts serving students from more advantaged backgrounds.



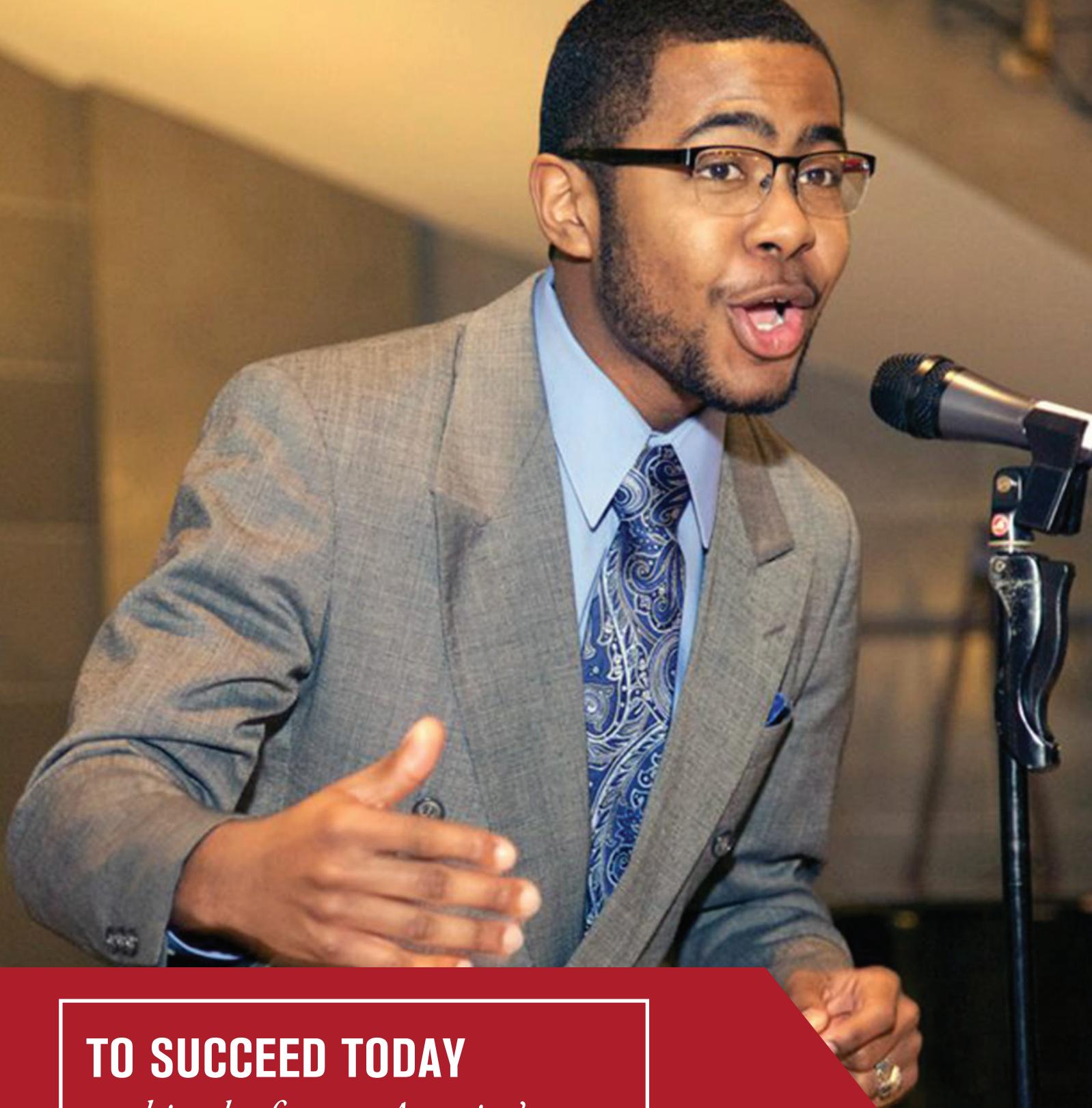
## THREE

While we can't claim that participation in fine arts courses **causes** higher academic achievement, study results definitely suggest that opportunities for **fine arts education in Missouri schools should be increased or, at the very least, maintained**. As before, there is no evidence that fine arts courses or instructional time in the arts should be cut as districts work for higher levels of student achievement.

## FOUR

Recommendations include the following:

- 1) Recognize and support the arts as a "core" component of the academic curriculum;
- 2) Maintain funding levels for fine arts education;
- 3) Increase the availability of courses in Theater and Dance; and
- 4) Support future research to help develop a more comprehensive picture of the State of Fine Arts Education in Missouri and to provide specific information to schools and districts for strengthening the quality and availability of fine arts education to students across the state.



## TO SUCCEED TODAY

*and in the future, America's children will need to be inventive, resourceful, and imaginative. The best way to foster that creativity is through arts education.*



# Arts Education Makes a Difference in Missouri Schools.

Education in the arts is more important than ever. In the global economy, creativity is essential. Today's workers need more than just skills and knowledge to be productive and innovative participants in the workforce... To succeed today and in the future, America's children will need to be inventive, resourceful, and imaginative. The best way to foster that creativity is through arts education.<sup>2</sup>

## ►INTRODUCTION

Since the publication of the "Arts Education Makes a Difference in Missouri Schools" in 2009, the State has taken additional steps to strengthen the place of the fine arts in public schools. As an example, following a collaborative effort between the Department of Elementary and Secondary Education and the Missouri Arts Council, a full-time Director of Arts Education is once

again working within the state's department of education (following the elimination of the position a number of years before). In addition, Missouri's Regional Professional Development Centers are taking a more active role in providing professional development opportunities for arts teachers. A Professional Development Coordinator hired by the Missouri Alliance for Arts Education is cur-

rently working with the RPDCs and other stakeholders to create a strategic plan for strengthened and expanded professional development in arts education across the state.

The report that follows is an update of the research, first reported in 2009, into student access to the arts and indicators of student success for Missouri districts by levels of arts instruction and engagement. Utilizing core data for 2013, the study summarizes the availability of courses in music, visual art, dance, and theatre and examines student attendance, standardized test scores, and other indicators for districts with high, medium, and lower levels of fine arts engagement.

A report entitled “Reinvesting in Arts Education,” released by the President’s Committee on the Arts and the Humanities, noted that the US is facing an urgent need to transform key aspects of America’s educational system. Success in today’s workplace calls for a growing emphasis on “soft skills” that a surprising number of employers report are missing in today’s college graduates. These skills not only include communication and interpersonal skills, but also critical thinking, creativity and collaboration.<sup>3</sup> According to a survey of 500 senior executives in US companies conducted by Adecco, 54% believe that the education system is not teaching the skills needed in today’s workforce.<sup>4</sup>

As “Reinvesting in Arts Education: Winning America’s Future Through Creative Schools” describes, the pools of proponents of arts education are growing to include new allies among policymakers, civic leaders, and business executives, who see the potential of the arts in “spurring innovation, engaging students in learning, and creating a climate of high performance in schools” (p. vi)... and supporting the skills that will keep the US at the forefront of a global economy.

The emergence of new attention to the role of arts education is, in part, a response to trends observed following the passage of the federal *No Child Left Behind* (NCLB)

legislation in 2001. With its emphasis on Communication Arts, Mathematics and Science, NCLB led to an intensified focus on “the basics” and standardized test results which, in many respects, weakened, or called into question, the place of fine arts education in the US public school curriculum. Although the arts were also identified as a core academic subject area, a 2009 study by the US Government Accountability Office (GAO) found that instruction time in the arts had decreased for many students in the US, particularly for students in schools identified as needing improvement under the provisions of NCLB (US GAO, 2009).

Unlike many states in the US, the State of Missouri has maintained requirements for students to learn about and experience the fine arts in its public schools for decades. In 1990, well in advance of the impact of NCLB, Missouri’s Arts Education Task Force established a comprehensive plan to include the arts as a basic component of every child’s education. Endorsed by Governor John Ashcroft and Commissioner of Education Robert Bartman, the report documented how arts advocates, school districts, colleges, and communities could implement effective fine arts education in all of the state’s school districts as well as develop better arts education training for teachers.

In 1992, a position paper published by the Missouri Arts Council focused on best practices for expanding fine arts education. Essentially, that paper extended the 1990 plan to incorporate sequential arts programs into Missouri’s schools, outlining the conditions and expectations for teaching fine arts as well as for pre-service and in-service education for fine arts specialists and classroom teachers. Four years later, the Missouri State Board of Education adopted standards for the fine arts as part of the Show-Me Standards.

Today, as the US Congress considers a new version of the Elementary and Secondary Education Act that is expected to include significant mention of the arts as a key component in public education, Missouri students

<sup>2</sup> Arne Duncan, US Secretary of Education, in “Reinvesting in Arts Education: Winning America’s Future Through Creative Schools.”

<http://www.adeccousa.com/about/press/Pages/20130930-lack-of-soft-skills-negatively-impacts-todays-us-workforce.aspx>

<sup>3</sup> Workforce Solutions Report, Adecco

<sup>4</sup> <http://www.adeccousa.com/employers/resources/Pages/skills-gap-in-the-american-workforce.aspx>

continue to be required to participate in fine arts courses, particularly at the elementary and high school levels. At the elementary level, districts are required to provide 50 minutes of visual art and 50 minutes of music per week for students in grades Kindergarten through 5 in self-contained classrooms. In addition, the State Board of Education recently adopted guidelines for Pre-Kindergarten education, which includes a focus on the need for children to participate in the “expressive arts.”

Beyond the elementary level, there are no state fine arts requirements for middle school students, although

districts are required to offer arts courses as electives. One fine arts credit is required for Missouri students to graduate from high school.

At the district level, all Missouri districts are required to certify, on an annual basis, that adequate instruction in the arts is available to its students. Arts teachers must be certified by the State’s Department of Elementary and Secondary Education (DESE) in the disciplines that they teach, which include music, visual art, dance and theatre.

## ►ACCESS AND ACHIEVEMENT: *Arts Education in Public Schools*

Since the publication of the “Arts Education Makes a Difference in Missouri Schools” in 2010, the State has taken additional steps to strengthen the place of the fine arts in public schools. As an example, following a collaborative effort between the Department of Elementary and Secondary Education and the Missouri Arts Council, a full-time Director of Arts Education is once again working within the state’s department of education (following the elimination of the position a number of years before). In addition, Missouri’s Regional Professional Development Centers are taking a more active role in providing professional development opportunities for arts teachers. A Professional Development Coordinator hired by the Missouri Alliance for Arts Education is currently working with the RPDCs and other stakeholders to create a strategic plan for strengthened and expanded professional development in arts education across the state.

The report that follows is an update of the research, first reported in 2010, into student access to the arts and indicators of student success for Missouri districts by levels of arts instruction and engagement. Utilizing core data for 2013, the study summarizes the availability of courses in music, visual art, dance, and theatre and examines student attendance, standardized test scores, and other

indicators for districts with high, medium, and lower levels of fine arts engagement.

“Arts Education Makes a Difference in Missouri Schools,” released by the MAAE in 2010, contributed to the national discussion of student access to the arts in public schools and the relationship between arts education and student achievement. The number of studies examining these topics in different states across the US continues to grow.<sup>5</sup> As noted in the 2010 report, a number of these studies documented gaps and disparities in access to quality arts instruction. For example, the Illinois study (*Arts at the Core: Every School, Every Student*, Illinois Creates Coalition, 2005) found that Illinois students lacked equal access to arts education, with 20% of the state’s principals indicating their schools had no arts program of any kind. In California, *The Sound of Silence* report (Music for All Foundation, 2004) documented the “unprecedented decline of music education” in the state’s public schools, showing that the percentage of all California students involved in music education courses declined by half over a five-year period (the 1999-2000 academic school year through 2003-2004). Finally, a 2014 study released for New York City schools found that 38% of elementary schools, 22% of middle schools,

and 20% of high schools lacked full-time certified arts teachers.<sup>6</sup> The study also found that schools in high-poverty neighborhoods and those with higher percentages of children of color tended to have lower numbers of certified arts teachers.

A recent national study found that, although there are examples of deep declines in arts education in some states, across the US, the overall decreases have been more modest. The study conducted by the US Department of Education, National Center for Education Statistics, found the following:

- 94% of elementary schools nationwide provided music education to their students during the 2009-10 school year, showing no decrease from a previous study conducted 10 years earlier. There was a slight decrease in the provision of visual arts instruction, which declined to 83% of all elementary schools in 2009-10 as compared to 87% in 1999-2000.
- 91% of secondary schools provided classes in music (an increase of 1% from the previous study) and 89% included instruction in the visual arts (a decline from 93% compared to 10 years before).

The study did identify decreases in both elementary and secondary schools in the level of dance and drama theatre education:

- At the elementary level, the number of schools offering dance classes declined from 20% in 1999-2000 to 3% ten years later, while the number of schools providing instruction in drama/theatre dropped from 20% in 1999-2000 to 4% in 2009-10.

- At the secondary level, the drops for these two disciplines were less pronounced, from 14% to 12% in dance and 48% to 45% in drama/theatre.

As in other studies, the data also revealed disparities between schools serving low-income youth and those serving students from more affluent backgrounds. For example:

- In elementary schools serving low-income students (with 76% or more students in the district eligible for free or reduced-priced lunch), only 83% were providing art instruction, compared to 92% of schools serving students with higher incomes.
- In music, percentages were 89% for schools with lower-income students and 97% for schools with more advantaged students.

In regards to the arts and student academic performance, landmark studies documenting relationships between arts education and positive student outcomes in the areas of standardized test scores, graduation rates, and overall attendance and positive attitudes in school include the following:

- *Champions of Change: The Impact of Arts on Learning* (Fiske, 1999), produced by the Arts Education Partnership, in collaboration with the President's Committee on the Arts and the Humanities. This report reviewed seven studies that identified correlations between higher levels of arts engagement and higher grades and test scores in mathematics and reading. It also concluded that the arts can be effective in engaging students who may otherwise show a lack of interest in school.



- Included in *Champions of Change* was James Catterall's (Catterall et al., 1999) analysis of the Department of Education's National Education Longitudinal Study (NELS) 1988 database of 25,000 students. This study found that students (in Grades 8 through 12) with high levels of arts participation outperformed students with low levels of arts participation on nearly every measure tested. His research also identified the potential importance of sustained involvement in a single discipline, such as instrumental music or theatre arts. Findings also showed gains in self-concept, motivation, empathy, and tolerance, and held true for students from lower socioeconomic groups.
- Arts Education Partnership's (AEP) *Critical Links: Learning in the Arts and Student Academic and Social Development*, funded by the National Endowment for the Arts and the U.S. Department of Education (Deasy, 2002) and the National Assembly of State Arts Agencies' *Critical Evidence: How the Arts Benefit Student Achievement* (Ruppert, 2006). *Critical Links* highlights and provides discussion on 62 research studies that examine the effects of arts education on students' social and academic skills, including further work by Catterall et al. (2002) and Vaughan and Winner (2002), discussing how arts may (and may not) affect SAT scores. *Critical Evidence* builds further upon the earlier studies and makes a "case for the arts" by providing a compendium of strong education research and the ties between the arts and academic and social impacts.

A 2012 report by James Catterall and colleagues addressed arts and achievement in at-risk youth. Combining longitudinal data from four different studies, this report summarized the following findings:

- Socially and economically disadvantaged youth with high arts engagement have better outcomes than those without significant exposure to arts education.
- At-risk youth with intense engagement in the arts have achievement levels closer to the general youth population than at-risk youth who do not.

- Arts involvement is positively correlated with not only academic achievement (with higher GPAs and higher scores in writing and science) but also with higher aspirations to attend college and higher levels of civic engagement.

Studies at the state level have confirmed the correlations between arts education and student achievement. Research released by the Florida Department of Education (Kelly, 2009) included an analysis of a cohort of 12th grade students and fine arts enrollment found that the more music and arts classes taken, the higher the student achievement on measures including standardized test scores on the SAT and the Florida Comprehensive Assessment Test. Results were consistent across racial/ethnic groups and were also true for students eligible for free/reduced-price lunch. Another 2009 study, released by the Center for Arts Education (CAE), found that New York City schools that offered their students the most access to arts education also had the highest high school graduation rates, a finding consistent with previous studies (see, for example, Barry et al., 1990, and Clawson & Coolbaugh, 2001).

A final study went beyond the impact of arts involvement on school indicators to examine outcomes beyond high school graduation. Using data from the US Department of Education's Education Longitudinal Study, Elpus (2014) found that students who had enrolled in the arts for at least one whole credit hour in high school were 29% more likely to apply to a postsecondary institution than were non-arts students and 21% more likely to have attended a postsecondary institution two years past high school graduates.<sup>7</sup> In addition, arts-enrolled students were as likely to pursue STEM majors (in Science, Technology, Engineering or Math) as their non-arts peers.

This report adds to previous research on arts education with a focus on Missouri public school districts to update the findings reported by the MAAE in 2010. This report is part of a broader, multi-year, statewide study of fine arts education in schools across the state.

# METHODOLOGY

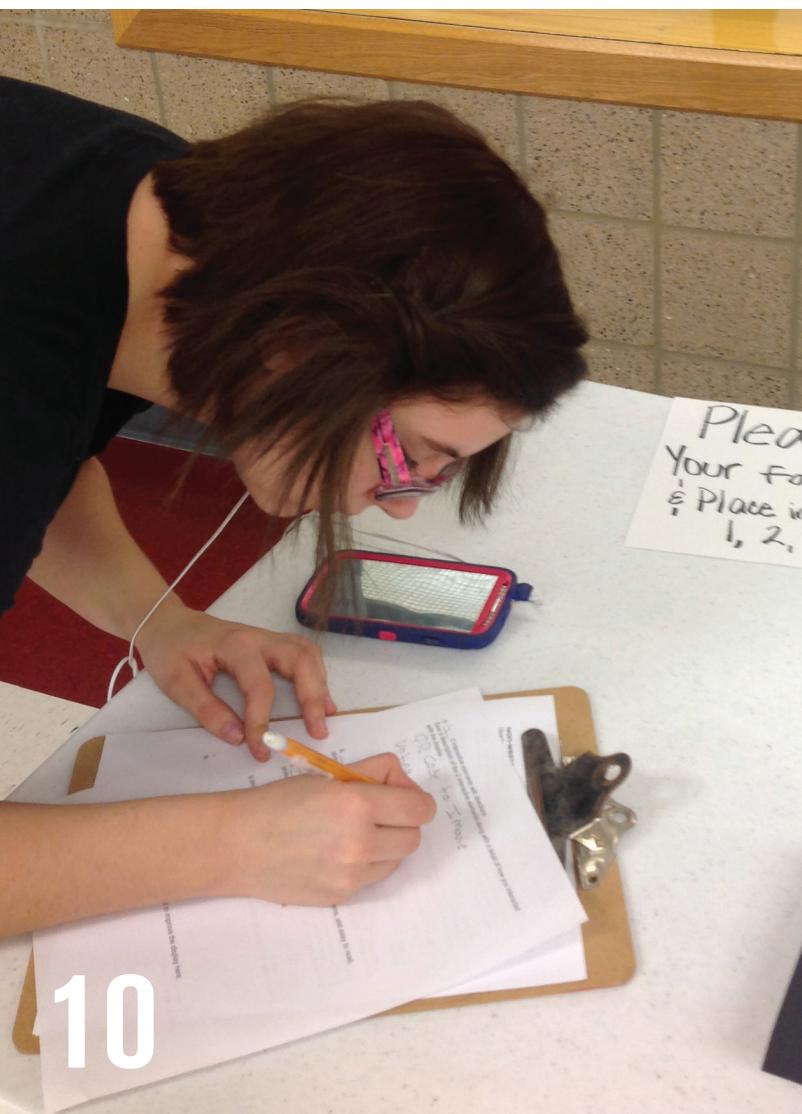
As previously stated, this study is based on the analysis of data submitted by school districts across the state to the Missouri Department of Elementary and Secondary Education's Core Data System. Analysis of the data began in 2014 utilizing the most recent information available at the time, which was data reported for schools for the 2012-2013 academic year. Because Core Data are submitted multiple times per year by diverse educational personnel with varying levels of experience and expertise in data collection and reporting, it was recognized early on that there may be errors in the information. Thus, each stage of the analysis involved careful reviews of the submitted data.<sup>8</sup> After the merging of data from various modules of the Core Data (including with standardized test score files maintained by the state and available on DESE's School Data website), charter schools and

"special" districts (like the Missouri School for the Deaf and instructional programs of the Missouri Department of Corrections) were removed, resulting in a total of 519 districts for inclusion in the study.

The following approaches were used in examining the Core Data:

- Summary or descriptive analysis regarding arts courses across districts and disciplines;
- Correlational analysis<sup>9</sup> to examine the relationships between student participation in fine arts courses and behavioral and academic indicators;
- The comparison of means (averages)<sup>10</sup> to further explore differences among behavioral and academic indicators for districts with varying levels of student participation in the arts; and
- The use of regression models to examine the relationships between arts participation and behavioral and academic indicators when controlling for: 1) student/family income levels and 2) student racial/ethnic backgrounds.

Additional information on methodology is included in relevant sections of study results.



<sup>7</sup> <http://arts.gov/sites/default/files/Research-Art-Works-Maryland2.pdf>

<sup>8</sup> During these reviews, it was determined that some data elements lacked the specificity needed for a meaningful analysis (like the grade levels of students participating in specific arts courses that were often reported for categories/ranges of grade levels that were not mutually exclusive) or that the data was incomplete or included significant reporting errors. Thus, indicators like these were not included in the current study.

<sup>9</sup> Using Pearson Product-Moment correlations

<sup>10</sup> Using Analysis of Variance (ANOVA) and post-hoc statistical tests

# ►STUDY RESULTS: *Fine Arts Courses in Missouri Schools*

Information on fine arts courses for the 519 districts in the analysis of Core Data submitted in 2013 include the following:

- Nearly all Missouri districts offered courses in the **Visual Arts and Music**. Although Missouri districts are required to provide these classes at the elementary level, there was one district that indicated it did not provide any courses in Visual Arts to its students, and six districts indicated they did not provide courses in Music.<sup>11</sup>
- Visual Arts and Music courses were offered across the elementary, middle, and high school levels. Other fine arts courses tended to be offered at the high school level.
- Just over one-third (36%) of Missouri districts offered their students courses in **Theater or Drama**. This represents a **decline** from 2010, when 41% of the state's districts offered Theater or Drama classes.
- Only three districts (less than 1%) offered **Dance** classes. These classes were mostly offered at the middle and high school levels, and did not include physical education units that included dance. This is a slight decline (of one district) from 2010.
- Only one district offered classes in the **Allied Arts** (combining or integrating instruction in two or more arts disciplines). Again, this is a decline of one district from the previous results.

COURSE	% OF DISTRICTS OFFERING COURSES IN THIS DISCIPLINE
Courses in the Visual Arts	99.8%
Courses in Music	99%
Courses in Drama	36%
Courses in Dance	.6%
Courses in the “Allied Arts” (a combination of arts disciplines)	.2%

These results confirm that courses in the Visual Arts and Music are widely available to students in Missouri, a finding that is not surprising given the state requirements to: 1) provide art and music instruction to all elementary-aged students, 2) provide arts electives in middle school, and 3) require all high school students to take at least one arts course for graduation.

According to additional analyses, the availability of fine arts education in Missouri districts does not differ significantly by the percentage of students eligible for free or reduced-price lunch or the racial/ethnic composition of the student body. That is, there is no evidence that schools serving more disadvantaged students provide lower levels of arts instruction.

Overall, although there are (anecdotal) reports that some Missouri districts are cutting instruction time in the arts in response to budget cuts or the need for instruction directly related to deficits in standardized test scores, Missouri has not experienced the severe cutbacks in arts instruction as reported for other states.

<sup>11</sup> These results are very similar to the 2010 results. The only difference is that in 2010, five districts did not report offering music classes.



# ►MEASURES OF ARTS EDUCATION

## *Participation and Student Outcomes*

As previously mentioned, the 2010 Missouri Alliance for Arts Education study found significant relationships between the level of student fine arts participation at the district level and the following student outcomes: standardized test scores in English Language Arts and Math, attendance rates, disciplinary rates, and high school graduation rates. The current research utilizing 2013 data includes similar measures that were used in 2010, including the following:

**Level of student participation in fine arts education at the district level:** As a measure of arts education in specific districts, an indicator of the level of student participation in fine arts courses was created from the 2013 Core Data as the total number of students (at all grade levels) enrolled in Visual Art, Music, Drama, Dance, and Allied Arts classes in each district divided by the total student enrollment in that district. This created an index that reflects, in effect, both the number of arts classes available in the district and the level of student enrollment in these classes, while controlling for the size of the district. To create groups for comparison, districts were divided into thirds based on their arts education ratios, with approximately one-third designated as a “low arts” group and the top third designated as a “high arts” group (and the middle third categorized as “medium arts”).

### **Indicators of student behavior at the district level:**

1. The **student attendance rate**, which is defined as the number of school attendance hours reported for all students in the district divided by the total possible number of school hours.
2. The **student disciplinary rate**, which is expressed in the Core Data as the number of disciplinary incidents that resulted in in-school or out-of-school suspension (including infractions for alcohol, weapons, illegal drugs, tobacco, and acts of violence) per every 100 students enrolled in the district.

### **Indicators of student academic performance at the district level:**

1. Average **MAP<sup>12</sup> scale scores in English Language Arts and Mathematics** for students in grades three through eight; and
2. The **high school graduation** rate, which is an indicator of both student academic achievement (i.e., only students with passing grades can graduate) and student behavior (in that students continue to attend school through twelfth grade).

# ► STUDY RESULTS:

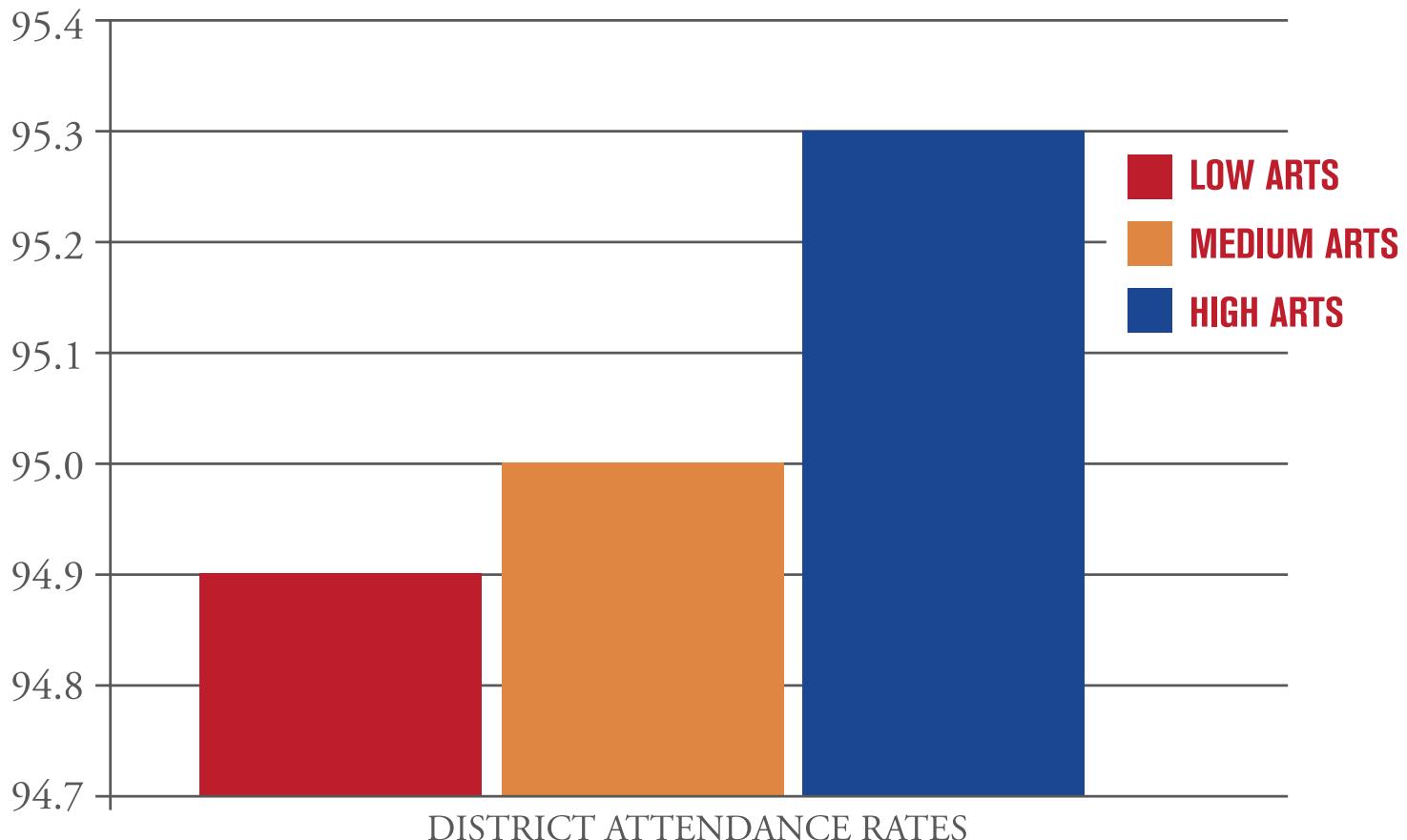
## *Relationships between Participation in Fine Arts Education and Attendance*

Analyses completed in 2014 utilizing 2013 data confirmed earlier results regarding the relationship between student participation in fine arts education and student attendance. Specifically:

**Across Missouri schools, those districts with higher levels of student enrollment in arts classes had higher attendance rates than districts with lower levels of student participation in the arts.<sup>13</sup>**

As shown in the graph below, districts with lower levels of arts participation (the lowest third, equaling 166 districts) reported an average attendance rate of 94.9. Districts with higher levels of participation (the top one-third, or 173 districts) reported an average rate of 95.3. *Although the difference appears to be small, daily attendance rates are part of the formula for determining state and federal funding for individual districts, with lower attendance rates resulting in lower funding levels.*

### DISTRICT ATTENDANCE RATES BY ARTS PARTICIPATION



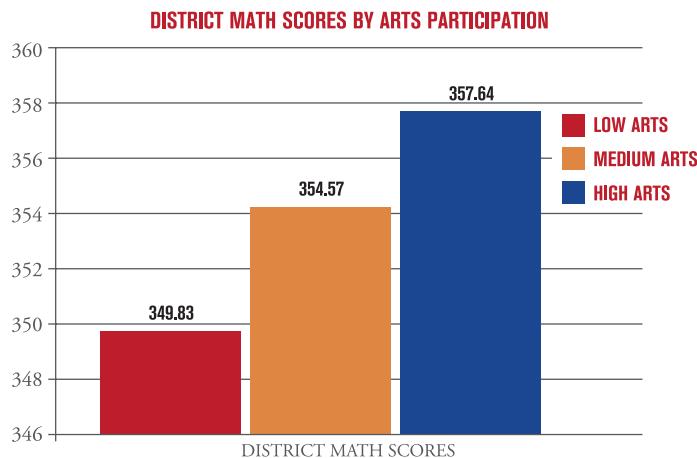
<sup>13</sup> According to results of ANOVA and post-hoc tests.

# ►RELATIONSHIPS BETWEEN PARTICIPATION

## *In Fine Arts Education and Standardized Test Score*

Across Missouri districts, student participation in arts education is significantly related to student proficiency in Mathematics, with higher participation equaling higher Math index scores.

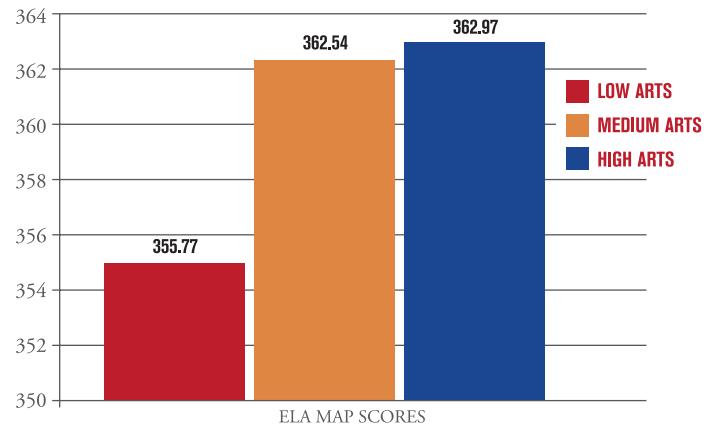
According to correlational analysis utilizing 2013 data, districts with higher levels of student enrollment in the arts showed better performance on MAP tests in Mathematics than districts with lower levels of student arts participation. Specifically, the higher the level of student enrollment in fine arts courses, the higher the average MAP index score in Math. As the following graph shows, districts with low levels of arts participation showed an average MAP index score of 349.83, compared to a score of 357.64 for students in districts with high enrollment in fine arts classes.



In Missouri schools, student participation in the fine arts is significantly related to student test scores in English Language Arts (ELA), with higher average scores for districts with higher levels of arts education.

The graph below shows that, in 2013, districts with lower levels of student arts participation had an average MAP index score in ELA of 355.77, compared to an index score of 362.97 for students in districts with high enrollment in fine arts classes.

**DISTRICT ENGLISH LANGUAGE ARTS SCORES BY ARTS PARTICIPATION**

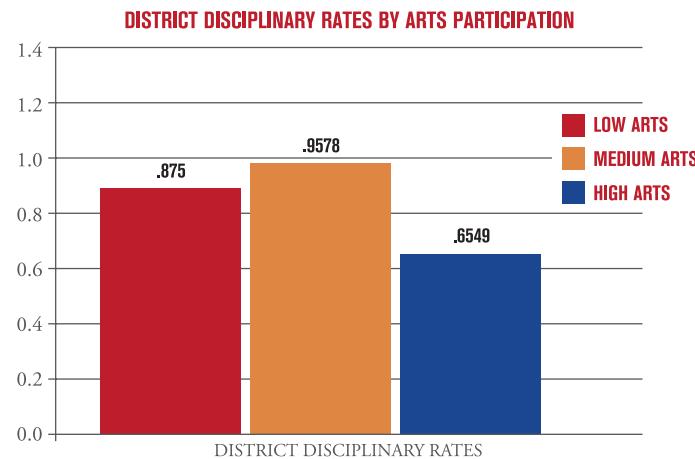




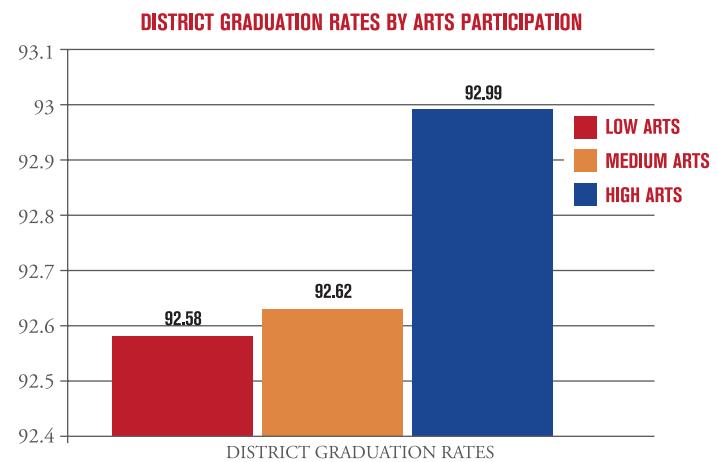
## ► OTHER RELATIONSHIPS

**Unlike the 2010 study results, student participation in arts education in Missouri districts is not significantly related to disciplinary rates or high school graduation rates (according to Core Data for 2013).**

As shown in the graph below, Missouri districts with high levels of arts participation still have lower disciplinary rates than districts with lower levels of fine arts education, but the relationship is not linear or statistically significant. The average disciplinary rate is highest for districts with medium levels of arts participation which suggests that other factors outweigh the influence of arts participation levels.



Similarly, Missouri school districts with higher levels of student participation in the arts reported higher high school graduation rates in 2013 than districts with lower levels of fine arts education; however, the difference is less pronounced than in 2010 and is no longer statistically significant. As compared to 2010 results, the average graduation rate for all districts in Missouri increased slightly. The average rate for districts with lower levels of arts participation increased (in 2013) to 92.58% compared to the 87.9% reported in 2010, with the average rate of high arts districts increasing to 92.99% compared to an average rate of 91.2% as reported in 2010.



# ►RELATIONSHIPS BETWEEN ARTS EDUCATION *and Academic Indicators when Controlling for Student Demographic Characteristics*

While national and state-based efforts have made progress in narrowing the achievement gap between Caucasian and African American/Hispanic students, it is still true that student academic outcomes, including those that are a part of this study, are strongly related to student/family (and community) socioeconomic characteristics. Two of the most consistent indicators of student academic performance across the US include family income and student racial/ethnic background. Specifically, research has shown that children from low-income backgrounds are more likely to experience academic failure than their counterparts from higher-income families. Additionally, in spite of improvement, African American and Hispanic students still show a persistent achievement gap with children from Caucasian and Asian backgrounds.<sup>15</sup>

This study controlled for the influence of socioeconomic factors, or children's educational risk status, and the link between arts education and positive academic indicators, by controlling for these factors in regression analysis. Specifically, multiple regression models were created that, once again, examined the relationship between student arts participation and behavioral and achievement outcomes at the district level while removing the influence of low-income and minority status.

As a measure of the level of poverty among students in Missouri public school districts, the percentage of students who qualified for free or reduced-price school lunches was used.<sup>16</sup> Students in this category typically come from families who are living at or near the federal poverty level.

**This study found that, when controlling for the district poverty level and the percent of African American and Hispanic students, the relationships between arts participation and indicators of positive academic behaviors and performance were still significant.** This is true for the relationships between fine arts education and average MAP index scores in Math and English Language Arts as well as for the average student attendance rates.

**Thus, the findings of this research apply to children in public schools across the state, beyond the influence of district levels of poverty and percentages of African American and Hispanic students.**

<sup>14</sup> See, for example, reports available from the US Department of Education, including the report at <http://www.ed.gov/news/press-releases/achievement-gap-narrows-high-school-graduation-rates-minority-students-improve-faster-rest-nation>

<sup>15</sup> "Compared to whites, significant gaps for African American and Hispanic students are evident in virtually every measure of achievement: NAEP [National Assessment of Educational Process] math and reading test scores, high school completion rates, college enrollment and college completion rates" (from Harvard University's Achievement Gap Initiative website, <http://www.agi.harvard.edu/projects/thegap.php>). As the National Education Association notes, causes of this achievement gap include such factors as lack of economic opportunity for African Americans and Hispanics, a lack of neighborhood supports, low expectations of minority students, tracking of minority students into less demanding academic curricula, and unsafe schools (see <http://www.nea.org/home/17413.htm>).

<sup>16</sup> The percentage of students eligible for free/reduced-price lunch is an accepted, though imperfect, measure of household poverty in Missouri districts. Anecdotal evidence suggests that schools in Missouri have found that many families that live in poverty do not apply for the free/reduced-price lunch status due to concerns about privacy and their children being stigmatized by participating in the program.

# ►CONCLUSION

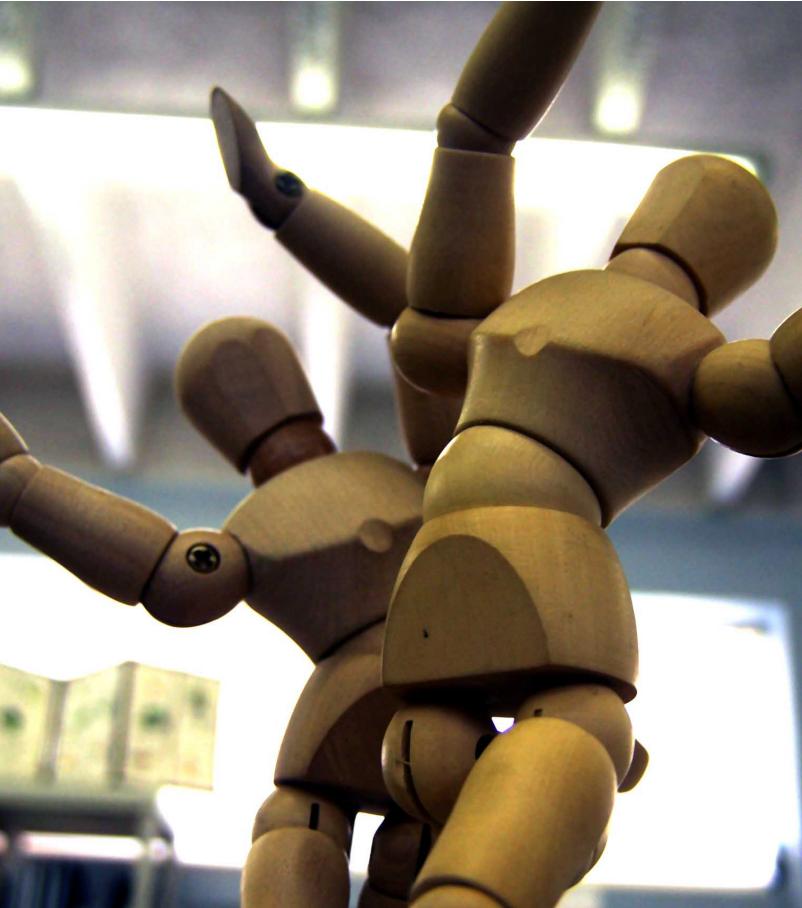
The Conference Board, a global, independent business membership and research association, has noted that creativity ranks among the top five skills that US employers believe to be of increasing importance in today's workforce. Arts participation – both in schools as well as in the workplace – strengthen creativity, "the fuel that drives innovation." As the educational progress of our students continues to be a major focus of citizens and policymakers, not only in Missouri, but across the US, this study adds to what is currently known about the relationship between the arts and positive outcomes in public education. The movement toward educational excellence and more effectively preparing young people for today's workplace is not hindered by state requirements and support for fine arts education; it is strengthened. While some of the relationships between the levels of arts education participation and district outcomes have become more complex since the last Missouri study was released in 2010, there is still a clear association between

fine arts education and standardized test scores, even when controlling for the socioeconomic status of students.

Once again, results of this research do not prove that participation in fine arts courses causes higher academic achievement. But continued associations between arts education and higher standardized test scores and other positive student indicators strongly suggest that arts education in Missouri schools should be maintained and strengthened.

Findings support the following recommendations:

- **Continue to strengthen the position of the fine arts as part of the core curriculum.** This may include strengthening requirements for fine arts study at the middle school level and incorporating the arts into the state's approach to student assessment.
- **Expand public school offerings in Theatre and Dance.** Currently, even though instruction in drama and theatre can have unique effects on literacy and communication skills, theatre courses are available in less than half of Missouri public school districts. Dance courses are available in only one percent of Missouri districts even though dancing can be effective in increasing physical activity among those at highest risk for childhood obesity in addition to its educational benefits. Trends in Missouri and across the country suggest that courses in these two disciplines are declining much faster than those in Visual Arts and Music although they still represent important contributions to the curriculum.



- **Explore ways to increase and strengthen arts education and participation in public schools** to further benefit students across the socioeconomic spectrum. This exploration could include evaluating the contribution of after school arts programs and arts integration efforts involving nonprofit organizations and teaching artists that are currently underway in Missouri schools.
- **Evaluate the quality of arts instruction in Missouri districts and develop new ways to support and strengthen instruction.** While the provision of arts instruction by certified arts teachers suggests a foundation for effectiveness, other variables no doubt impact the quality of arts education from school to school or district to district. These variables may include the availability of high quality professional development opportunities for arts instructors, the extent to which arts teachers have the support and resources they need to be effective, and the extent to which arts teachers are using best practices in education in their respective disciplines.
- Develop public/private partnerships to expand funding for arts education initiatives across the state. **As public schools continue to cope with ongoing budget cuts, collaborative funding approaches that utilize funding from corporations and private foundations to leverage and extend state funding can help sustain and expand effective arts education programming for students at all income levels.**



- **Convene policymakers, business leaders, educational leaders, other community representatives, and representatives of private and corporate foundations to develop a statewide framework for supporting and expanding arts education in Missouri.** The purpose of their work would include:
  - 1) raising public awareness of the importance of arts education;
  - 2) building a shared understanding of the benefits of arts education across sectors;
  - 3) formulate objectives for the future, and
  - 4) developing action steps to ensure that arts education continues to make a difference for students across Missouri.

<sup>17</sup> See the report, “Ready to Innovate: Are Educators and Executives Aligned on the Creative Readiness of the U.S. Workforce?” at <https://www.conference-board.org/topics/publicationdetail.cfm?publicationid=1557>

<sup>18</sup> <http://www.providenceri.com/efile/3407>

<sup>19</sup> <http://www.ericdigests.org/2004-1/drama.htm>

<sup>20</sup> <http://pediatrics.aappublications.org/content/early/2015/05/12/peds.2014-2415.abstract>

# APPENDIX ONE: *Recent Studies on Arts Education From Individual States*

STATE	NAME OF STUDY	AUTHOR/YEAR
Arizona	Engaging Students, Supporting Schools, Accessing Arts Education	<a href="http://azarts.gov/wp-content/uploads/2010/07/Engaging_Students072810.pdf">http://azarts.gov/wp-content/uploads/2010/07/Engaging_Students072810.pdf</a>
California	Quality, Equity, Access	<a href="http://www.artsed411.org/files/docs/briefingpaper05.pdf">http://www.artsed411.org/files/docs/briefingpaper05.pdf</a>
Idaho	A Report on the Status of Arts Education in Idaho	<a href="http://www.aep-arts.org/wp-content/uploads/2014/05/ID-2009.pdf">http://www.aep-arts.org/wp-content/uploads/2014/05/ID-2009.pdf</a>
Illinois	Arts at the Core	<a href="http://www.nasaa-arts.org/Research/Key-Topics/Arts-Education/IllinoisArtsatTheCore.pdf">http://www.nasaa-arts.org/Research/Key-Topics/Arts-Education/IllinoisArtsatTheCore.pdf</a>
Kentucky	Status of Arts Education in Kentucky Public Schools	<a href="http://www.nasaa-arts.org/Research/Key-Topics/Arts-Education/KentuckyArtsEducSurvey05.pdf">http://www.nasaa-arts.org/Research/Key-Topics/Arts-Education/KentuckyArtsEducSurvey05.pdf</a>
Michigan	Arts Alive!	<a href="https://www.michigan.gov/documents/ArtServe_ArtsAlive_51884_7.pdf">https://www.michigan.gov/documents/ArtServe_ArtsAlive_51884_7.pdf</a>
Montana	A Report on the Status of Arts Education in Montana	<a href="http://www.aep-arts.org/wp-content/uploads/2014/05/MT-2009.pdf">http://www.aep-arts.org/wp-content/uploads/2014/05/MT-2009.pdf</a>
New Jersey	Project Within Our Power: New Jersey Arts Education Census Project	<a href="http://www.americansforthearts.org/sites/default/files/pdf/2014/by_program/reports_and_data/legislation_and_policy/state_policy_pilot_program/New_Jersey.pdf">http://www.americansforthearts.org/sites/default/files/pdf/2014/by_program/reports_and_data/legislation_and_policy/state_policy_pilot_program/New_Jersey.pdf</a>
New York	Staying in School	<a href="http://centerforartsed.org/resources/staying-school-arts-education-and-nyc-high-school-graduation-rates">http://centerforartsed.org/resources/staying-school-arts-education-and-nyc-high-school-graduation-rates</a>
North Carolina	Arts Education Programs in North Carolina	<a href="http://www.nasaa-arts.org/Research/Key-Topics/Arts-Education/NorthCarolinaSurveyReport.pdf">http://www.nasaa-arts.org/Research/Key-Topics/Arts-Education/NorthCarolinaSurveyReport.pdf</a>
Ohio	The Status of Arts Education in Ohio's Public Schools	<a href="http://www.oac.state.oh.us/makingthecase/PDF/2013%20Status%20of%20Arts%20Education%20in%20Ohio's%20Public%20Schools.pdf">http://www.oac.state.oh.us/makingthecase/PDF/2013%20Status%20of%20Arts%20Education%20in%20Ohio's%20Public%20Schools.pdf</a>
Texas	Academic Performance, Drop Out Rates and Attendance Rates in Texas Public Schools Correlated to Fine Arts Course Enrollment	<a href="https://www.tmea.org/assets/pdf/Fine_Arts_Enrollment_Data_Summary_2011.pdf">https://www.tmea.org/assets/pdf/Fine_Arts_Enrollment_Data_Summary_2011.pdf</a>
Washington	Arts Education Research Initiative	<a href="http://www.arts.wa.gov/media/dynamic/docs/Report-Arts-Education-Research-Initiative.pdf">http://www.arts.wa.gov/media/dynamic/docs/Report-Arts-Education-Research-Initiative.pdf</a>

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# LITERATURE REVIEW

“Arts Education Makes a Difference in Missouri Schools,” released by the MAAE in 2010, contributed to the national discussion of student access to the arts in public schools and the relationship between arts education and student achievement. The number of studies examining these topics in different states across the US continues to grow.<sup>1</sup> As noted in the 2010 report, a number of these studies documented gaps and disparities in access to quality arts instruction. For example, the Illinois study (*Arts at the Core: Every School, Every Student*, Illinois Creates Coalition, 2005) found that Illinois students lacked equal access to arts education, with 20% of the state’s principals indicating their schools had no arts program of any kind. In California, *The Sound of Silence* report (Music for All Foundation, 2004) documented the “unprecedented decline of music education” in the state’s public schools, showing that the percentage of all California students involved in music education courses declined by half over a five-year period (the 1999-2000 academic school year through 2003-2004). Finally, a 2014 study released for New York City schools found that 38% of elementary schools, 22% of middle schools, and 20% of high schools lacked full-time certified arts teachers.<sup>2</sup> The study also found that schools in high-poverty neighborhoods and those with higher percentages of children of color tended to have lower numbers of certified arts teachers.

A recent national study found that, although there are examples of deep declines in arts education in some states, across the US, the overall decreases have been more modest. The study conducted by the US Department of Education, National Center for Education Statistics, found the following:

- 94% of elementary schools nationwide provided music education to their students during the 2009-10 school year, showing no decrease from a previous study conducted 10 years earlier. There was a slight decrease in the provision of visual arts instruction, which declined to 83% of all elementary schools in 2009-10 as compared to 87% in 1999-2000.

- 91% of secondary schools provided classes in music (an increase of 1% from the previous study) and 89% included instruction in the visual arts (a decline from 93% compared to 10 years before).

The study did identify decreases in both elementary and secondary schools in the level of dance and drama theatre education:

- At the elementary level, the number of schools offering dance classes declined from 20% in 1999-2000 to 3% ten years later, while the number of schools providing instruction in drama/theatre dropped from 20% in 1999-2000 to 4% in 2009-10.
- At the secondary level, the drops for these two disciplines were less pronounced, from 14% to 12% in dance and 48% to 45% in drama/theatre.

As in other studies, the data also revealed disparities between schools serving low-income youth and those serving students from more affluent backgrounds. For example:

- In elementary schools serving low-income students (with 76% or more students in the district eligible for free or reduced-priced lunch), only 83% were providing art instruction, compared to 92% of schools serving students with higher incomes.
- In music, percentages were 89% for schools with lower-income students and 97% for schools with more advantaged students.

In regards to the arts and student academic performance, landmark studies documenting relationships between arts education and positive student outcomes in the areas of standardized test scores, graduation rates, and overall attendance and positive attitudes in school include the following:

<sup>1</sup> For a list of studies available by state, see Appendix One

<sup>2</sup> [http://comptroller.nyc.gov/wp-content/uploads/documents/State\\_of\\_the\\_Arts.pdf](http://comptroller.nyc.gov/wp-content/uploads/documents/State_of_the_Arts.pdf)

- *Champions of Change: The Impact of Arts on Learning* (Fiske, 1999), produced by the Arts Education Partnership, in collaboration with the President's Committee on the Arts and the Humanities. This report reviewed seven studies that identified correlations between higher levels of arts engagement and higher grades and test scores in mathematics and reading. It also concluded that the arts can be effective in engaging students who may otherwise show a lack of interest in school.
- Included in *Champions of Change* was James Catterall's (Catterall et al., 1999) analysis of the Department of Education's National Education Longitudinal Study (NELS) 1988 database of 25,000 students. This study found that students (in Grades 8 through 12) with high levels of arts participation outperformed students with low levels of arts participation on nearly every measure tested. His research also identified the potential importance of sustained involvement in a single discipline, such as instrumental music or theatre arts. Findings also showed gains in self-concept, motivation, empathy, and tolerance, and held true for students from lower socioeconomic groups.
- Arts Education Partnership's (AEP) *Critical Links: Learning in the Arts and Student Academic and Social Development*, funded by the National Endowment for the Arts and the U.S. Department of Education (Deasy, 2002) and the National Assembly of State Arts Agencies' *Critical Evidence: How the Arts Benefit Student Achievement* (Ruppert, 2006). *Critical Links* highlights and provides discussion on 62 research studies that examine the effects of arts education on students' social and academic skills, including further work by Catterall et al. (2002) and Vaughan and Winner (2002), discussing how arts may (and may not) affect SAT scores. *Critical Evidence* builds further upon the earlier studies and makes a "case for the arts" by providing a compendium of strong education research and the ties between the arts and academic and social impacts.

A 2012 report by James Catterall and colleagues addressed arts and achievement in at-risk youth. Combining longitudinal data from four different studies, this report summarized the following findings:

- Socially and economically disadvantaged youth with high arts engagement have better outcomes than those without significant exposure to arts education.
- At-risk youth with intense engagement in the arts have achievement levels closer to the general youth population than at-risk youth who do not.
- Arts involvement is positively correlated with not only academic achievement (with higher GPAs and higher scores in writing and science) but also with higher aspirations to attend college and higher levels of civic engagement.

Studies at the state level have confirmed the correlations between arts education and student achievement. Research released by the Florida Department of Education (Kelly, 2009) included an analysis of a cohort of 12th grade students and fine arts enrollment found that the more music and arts classes taken, the higher the student achievement on measures including standardized test scores on the SAT and the Florida Comprehensive Assessment Test. Results were consistent across racial/ethnic groups and were also true for students eligible for free/reduced-price lunch. Another 2009 study, released by the Center for Arts Education (CAE), found that New York City schools that offered their students the most access to arts education also had the highest high school graduation rates, a finding consistent with previous studies (see, for example, Barry et al., 1990, and Clawson & Coolbaugh, 2001).

This report adds to previous research with a focus on Missouri public school districts and updating the findings reported by the MAAE in 2010. This report is part of a broader, multi-year, statewide study of fine arts education in schools across the state.



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Missouri Arts Council

815 Olive Street, Suite 16  
St. Louis, MO 63101-1503

(314) 340-6845  
or toll-free (866) 407-4752  
TDD (800) 735-2966  
Fax (314) 340-7215  
moarts@ded.mo.gov  
[www.missouriartscouncil.org](http://www.missouriartscouncil.org)

## ABOUT THE MISSOURI ARTS COUNCIL:

The Missouri Arts Council, a state agency, provides approximately \$8 million to nonprofit organizations through grants that encourage and stimulate the growth, development, and appreciation of the arts in Missouri. MAC provides funding to make quality arts programming possible in both large and small communities. Also, MAC staff are available to provide assistance in arts and nonprofit management. Their expertise includes community development, fundraising, marketing, grantwriting, arts education, artistic disciplines (visual arts, music, literature, theater, festivals and film/media) and more. MAC's mission is to act as a public leader, partner and catalyst in broadening the appreciation and availability of the arts in the state and fostering the diversity, vitality and excellent of Missouri's communities, economy and cultural heritage.



LS Associates, LLC  
1159C Olive Lake Drive  
St. Louis, Missouri 63132  
(314) 422-1050  
[lscheuler@outlook.com](mailto:lscheuler@outlook.com)

## ABOUT LS ASSOCIATES, LLC:

Leslie Scheuler, PhD, is the President of LS Associates, LLC, a consulting collaborative based in St. Louis, Missouri. With degrees in music, social work and social science research, Dr. Scheuler has worked with numerous arts organizations, educational institutions, and public school systems to build their capacity in planning for impact, measuring outcomes and increasing effectiveness. Her work has been funded by the U.S. Department of Education, the U.S. Department of State, the Ford Foundation, the Missouri Arts Council, the St. Louis Regional Arts Commission, and the John S. and James L. Knight Foundation.

LS Associates, LLC, is a collaborative of cross-sector consultants who work with individuals, organizations, and initiatives to build creativity, collaboration and positive social change. Services include strategic planning, program evaluation, impact measurement, and the facilitation of collaborations and collective impact.

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Missouri Alliance  
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